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	Filing Date		2006-02-03	
	First Named Inventor	Bryan		
	Art Unit	1656		
	Examiner Name	William Moore		
	Attorney Docket Number	4115-181		

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1	BAIER, K. ET AL., "Evidence for propeptide assisted folding of calcium dependent protease of the cyanobacterium Anabaena", "European Journal of Biochemistry", Aug. 1996, Page(s) 750-755, Volume 241	<input type="checkbox"/>
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6	BRYAN, P. ET AL., "Prodomains and protein folding catalysis", "Chem. Rev. ", 2002, Page(s) 4805-4816, Volume 102, Number 12	<input type="checkbox"/>
7	CAO, J. ET AL., "The Propeptide Domain of Membrane Type 1-Matrix Metalloproteinase Acts as an Intramolecular Chaperone when Expressed in ", "Journal of Biological Chemistry", September 22, 2000, Page(s) 29648-29653, Volume 275, Number 38	<input type="checkbox"/>
8	CARTER, P. ET AL., "Engineering enzyme specificity by 'substrate-assisted catalysis'", "Science", July 24, 1987, Page (s) 394-399, Volume 237, Number 4813	<input type="checkbox"/>
9	CARTER, P. ET AL., "Dissecting the catalytic triad of a serine protease ", "Nature", April 7, 1988, Page(s) 564-568, Volume 332	<input type="checkbox"/>
10	CAWLEY, NIAMH X. ET AL., "Activation and Processing of Non-anchored Yapsin 1 (Yap3p)", "J. Biol. Chem.", January 2, 1998, Page(s) 584-591, Volume 273, Number 1	<input type="checkbox"/>
11	CRAIK, C. ET AL., "The Catalytic Role of the Active Site Aspartic Acid in Serine Proteases", "Science", Aug. 21, 1987, Page(s) 909-913, Volume 237, Number 4817	<input type="checkbox"/>

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12	ESTELL, D.A. ET AL., "Probing Steric and Hydrophobic Effects on Enzyme-Substrate Interactions by Protein", "Science", August 8, 1986, Page(s) 659-663, Volume 233, Number 4746	<input type="checkbox"/>
13	FABRE, E. ET AL., "Role of the Proregion in the Production and Secretion of the Yarrowia lipolytica Alkaline Extracellular Protease", "The Journal of Biological Chemistry", Feb. 25, 1991, Page(s) 3782-3790, Volume 266, Number 6	<input type="checkbox"/>
14	FUKUDA, R. ET AL., "The Prosequence of Rhizopus niveus Aspartic Proteinase-1 Supports Correct Folding and Secretion of Its Mature Part in Sac", "The Journal of Biological Chemistry", April 1, 1994, Page(s) 9556-9561, Volume 269, Number 13	<input type="checkbox"/>
15	GALLAGHER, T.D. ET AL., "The prosegment-subtilisin BPN' complex: crystal structure of a specific 'foldase'", "Structure", September 15, 1995, Page(s) 907-914, Volume 3, Number 9	<input type="checkbox"/>
16	GRON, HANNE, ET AL., "Extensive comparison of the substrate preferences of two subtilisins as determined with peptide substrates which are...", "Biochemistry", 1992, Page(s) 6011-6018, Volume 31	<input type="checkbox"/>
17	GRON, HANNE, ET AL., "Studies of binding sites in the subtilisin from bacillus lentus by means of site directed mutagenesis and kinetic ...", "Subtilisin Enzymes: Practical Protein Engineering", 1996, Page(s) 105-112, Publisher: Plenum Press, Published in: New York	<input type="checkbox"/>
18	GRON, HANNE, ET AL., "Interdependency of the binding subsites in subtilisin", "Biochemistry", 1992, Page(s) 8967-8971, Volume 31, Publisher: American Chemical Society	<input type="checkbox"/>
19	HEDSTROM, L., "Serine Protease Mechanism and Specificity", "Chem. Rev.", November 23, 2002, Page(s) 4501-4523, Volume 102	<input type="checkbox"/>
20	KHAN, A. ET AL., "Molecular mechanisms for the conversion of zymogens to active proteolytic enzymes", "Protein Science", 1998, Page(s) 815-836, Volume 7	<input type="checkbox"/>
21	MARIE-CLAIRE, C. ET AL., "The Prosequence of Thermolysin Acts as an Intramolecular Chaperone when Expressed in trans with the Mature Sequence in E", "J. Mol. Biol.", Jan. 1999, Page(s) 1911-1915, Volume 285	<input type="checkbox"/>
22	NIRASAWA, SATORU ET AL., "Intramolecular chaperone and inhibitor activities of a propeptide from a bacterial zinc aminopeptidase", "Biochem. J.", 1999, Page(s) 25-31, Volume 341, Published in: GB	<input type="checkbox"/>

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23	PANTOLIANO, M. ET AL. , "Large Increases in General Stability for Subtilisin BPN through Incremental", "Biochemistry", June 21, 1989, Page(s) 7205-7213, Volume 28, Publisher: American Chemical Society	<input type="checkbox"/>
24	PERRONA, J. ET AL., "Structural basis of substrate specificity in the serine proteases", "Protein Science", Jan. 1995, Page(s) 337-360, Volume 4	<input type="checkbox"/>
25	RHEINNECKER, M. ET AL., "Engineering a Novel Specificity in Subtilisin BPN", "Biochemistry", February 9, 1993, Page(s) 1199-1203, Volume 32, Number 5, Publisher: American Chemical Society	<input type="checkbox"/>
26	RHEINNECKER, M. ET AL., "Variants of Subtilisin BPN with Altered Specificity Profile", "Biochemistry", February 9, 1993, Page(s) 221-225, Volume 33, Publisher: American Chemical Society	<input type="checkbox"/>
27	RUAN, B. ET AL., "Stabilizing the Subtilisin BPN' pro-domain by phage display selection: how restrictive is the amino acid code for maximu", "Protein Science", July 1998, Page(s) 2345-2353, Volume 7	<input type="checkbox"/>
28	RUAN, B. ET AL., "Rapid Folding of Calcium-Free Subtilisin by a Stabilized Pro-Domain Mutant", "Biochemistry", May 4, 1999, Page(s) 8562-8571, Volume 38, Number 26, Publisher: American Chemical Society	<input type="checkbox"/>
29	RUAN, B. ET AL., "Engineering Subtilisin into a Fluoride-Triggered Processing Protease Useful for One-Step Protein Purification", "Biochemistry", October 31, 2004, Page(s) 14539-14546, Volume 43, Number 46, Publisher: American Chemical Society	<input type="checkbox"/>
30	RUAN, B. ET AL., "Engineering Substrate Preference in Subtilisin: Structural and Kinetic Analysis of a Specificity Mutant", "Biochemistry", April 30, 2008, Page(s) 6628-6636, Volume 47, Number 25, Publisher: American Chemical Society	<input type="checkbox"/>
31	RUVINOV, S. ET AL., "Engineering the Independent Folding of the Subtilisin BPN' Prodomain: Analysis of the Two-State Folding versus Protein ", "Biochemistry", 1997, Page(s) 10414-10421, Volume 36, Publisher: American Chemical Society	<input type="checkbox"/>
32	SAUTER, N. ET AL., "Structure of a-lytic protease complexed with its pro region", "Nature Structural Biology", November 1998, Page(s) 945-950, Volume 5, Number 11	<input type="checkbox"/>
33	SHINDE, U. ET AL., "Folding Pathway mediated by intramolecular chaperone", "Proc.Natl. Acad. Sci.", August 1993, Page(s) 6924-6928, Volume 90	<input type="checkbox"/>

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34	SORENSEN S. ET AL., "Mutational Replacements of the Amino Acid Residues Forming the Hydrophobic", "Biochemistry", June 1, 1993, Page(s) 8994-8999, Volume 32, Publisher: American Chemical Society	<input type="checkbox"/>
35	STRAUSBERG, SUSAN ET AL., "Catalysis of a Protein Folding Reaction: Thermodynamic and Kinetic Analysis of Subtilisin BPN' Interactions with Its Pro", "Biochemistry", May 19, 1993, Page(s) 8112-8119, Volume 32, Number 32, Publisher: American Chemical Society	<input type="checkbox"/>
36	VENTURA, S. ET AL., "Mapping the Pro-region of Carboxypeptidase B by Protein Engineering", "THE JOURNAL OF BIOLOGICAL CHEMISTRY", July 9, 1999, Page(s) 19925-19933, Volume 274, Number 28	<input type="checkbox"/>
37	WANG, L. ET AL., "Prodomain mutations at the Subtilisin Interface: Correlation of the binding energy and the rate of catalyzed folding", "Biochemistry", Jan. 1995, Page(s) 415-420, Volume 15, Publisher: American Chemical Society	<input type="checkbox"/>
38	WANG, L. ET AL., "Engineering the Independent Folding of the Subtilisin BPN' Pro-Domain: Correlation of Pro-Domain Stability with the Rate", "Biochemistry", Jan. 1998, Page(s) 3165-3171, Volume 37, Number 9, Publisher: American Chemical Society	<input type="checkbox"/>
39	WELLS, J ET AL. , "Cloning, sequencing and secretion of Bacillus amyloliquifacens Subtilisin in Bacillus subtilis", "Nucleic Acids Research ", October 1983, Page(s) 7911-7925, Volume 11, Number 22	<input type="checkbox"/>
40	WETMORE, D.R. ET AL. , "Roles of the Propeptide and Metal Ions in the Folding and Stability of the Catalytic Domain of Stromelysin (Matrix Metal", "Biochemistry ", 1996, Page(s) 6549-6558, Volume 35	<input type="checkbox"/>
41	WINTHER, J. ET AL., "Propeptide of carboxypeptidase Y provides a chaperone-like function as well as inhibition of the enzymatic activity", "Proc. Natl. Acad. Sci.", October 1991, Page(s) 9330-9334, Volume 88	<input type="checkbox"/>
42	YAMAMOTO, YOSHIMI ET AL., "Proregion of Bombyx mori Cysteine Proteinase Functions as an Intramolecular Chaperone to Promote Proper Folding of the M", "Archives of Insect Biochemistry and Physiology ", Jun. 1999, Page (s) 167-178, Volume 42	<input type="checkbox"/>

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